INFO special report

BRIDGE MAINTENANCE NOT UP TO CODE

Forest Practices Code non-compliances in bridge inspections and maintenance

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Letter of Introduction

This special report has been prepared under section 189(3) of the Forest Practices Code, which permits the Chair of the Board to report to the Code ministers (Forests; Sustainable Resource Development; Water, Land and Air Protection; and Energy and Mines) and the public about issues arising from the Board's work in audits or complaint investigations. I would like to thank Board staff - Chris Mosher, Erika Anderson and Jacqueline Waldorf - for their work in assembling this information and preparing this special report under my direction. Any errors or omissions are my responsibility.

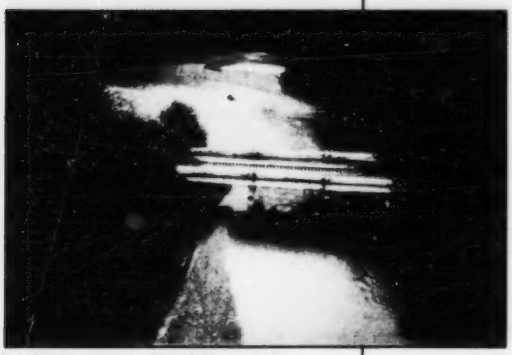
Bill Cafferata
Chair
Forest Practices Board

Forest Practices Board

In addition to audits and investigations of complaints, the Forest Practices Board Chair can undertake special reports to the public and four ministers (Forests; Energy and Mines; Water, Land and Air Protection; and Sustainable Resource Management) about matters relating to the Board's duties and important forestry issues related to the Code. Board members choose the scope and subject of the reports, which are often sparked by observations in the course of regular audits and investigations.

Bridge maintenance problems revealed by Forest Practices Board audits

The Forest Practices Code has requirements in place to ensure that bridges along logging roads are built, maintained and removed safely and don't cause harm to the environment or to the people using them. However, bridge maintenance problems are showing up more frequently in the Board's recent audits.



In the interest of public safety, operators in the public forest are required to build and maintain safe logging road bridges.

Over half of all bridges audited by the Forest Practices Board for maintenance obligations in the past two years were not in compliance with the regulations of the Forest Practices Code. In this period alone, three audits have turned up instances of significant non-compliance in the bridge maintenance programs of licensees in British Columbia's public forests.

These instances of non-compliance mean there is a greater potential for harm to people using the bridges, as well as the streams below the bridges.

For this reason, the Board has prepared this report on bridge issues found in its field work. It is hoped that this report will encourage licensees to ensure that their bridge maintenance programs are up to date, including all required inspections, as well as ensuring any required repairs are completed in a timely manner. The Board expects that if inspections are being carried out this year, any repairs required on bridges over fish-bearing streams will be completed during the 2001 streamwork window, which is generally before late September.

Code requirements for bridges

When the Forest Practices Board audits a forest company's operations or the government-run Small Business Forest Enterprise Program, it examines bridge construction and maintenance, as well as other forest planning and practices. The Board has found non-compliance in bridge maintenance when, among other things, licensees did not meet the timing requirements to do their inspections, or required repairs were not completed in a timely manner. These inspections are important to ensure bridges are properly maintained, to help ensure the safety of both industrial and public users and to prevent environmental damage.

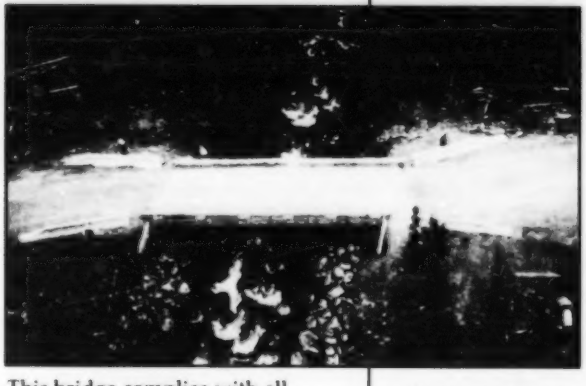
There are several areas of the Code that describe key bridge maintenance requirements. They fall under the *Forest Road Regulation* (FRR), sections 16 through 18. Through the course

of 19 audits conducted in 2000 and 2001, five of these sections have not been complied with in multiple instances.

Please note: the information below is a synopsis of these five sections. See the Forest Practices Code *Forest Road Regulation* for a complete description of these sections.

•FRR 16(1) – A qualified inspector must carry out a bridge inspection at least once every three years. An example of non-compliance under this section could be where there is no formal bridge inspection on record.

•FRR 16(3) – Bridge inspection records must contain some specific information about the bridge being inspected, such as recommendations for needed repairs and a schedule for those repairs. An example of non-compliance under this section could be where there is an inspection report on record stating that repairs are required to a bridge, but there is no schedule for those repairs to be done.



This bridge complies with all bridge-building and maintenance aspects of the Code.

•FRR 17(1) – Following an inspection, if a qualified inspector believes that a bridge may have structural deficiencies, the licensee must either correct the problem, close the bridge, restrict the traffic loads to a safe level or have a professional engineer evaluate the bridge according to the Canadian Standards Association requirements. An example of non-compliance under this section could be where the inspection report states that the bridge shows a lack of reinforcement on the upstream side of the bridge, but the repairs have not been completed at the time of the audit, and none of the other steps have been taken.

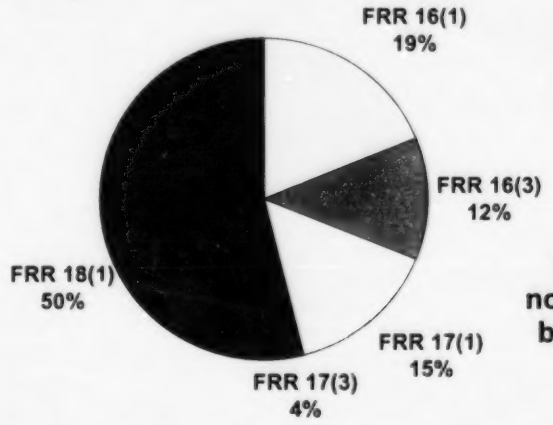
•FRR 17(3) – If a professional engineer determines that the bridge can't handle its original design load, then signs on both approaches of the bridge must show the actual capacity of the bridge. An example of non-compliance under this section could be where the inspection report states that a specific bridge load is restricted to five tonnes, but the licensee has not posted signs at both approaches to the bridge indicating the reduced load capacity.

•FRR 18(1) – A forest licensee who maintains a road that includes a bridge must ensure that the road can be safely used for industrial purposes. An example of non-compliance under this section could be where the bridge has no signs, or delineators, that clearly indicate the width of the bridge to oncoming vehicles.

Scope of the problem

Of 19 compliance audits conducted in all six forest regions in 1999 and 2000, one had no bridges to audit, one was in total compliance and 17 had varying levels of non-compliance. A total of 1,104 logging road bridges were eligible for audit by the Board. Within that population, auditors physically reviewed 277 bridges. Just over 50 percent – 140 bridges – were found not to be in compliance with the Code in some manner. Some of those bridges did not comply with more than one Code requirement but, for the purposes of this report, only the most significant problem was counted for each bridge. Most of the problems fell under FRR section 18(1) regarding public safety. For obvious reasons, this is of great concern to the Board and is the main impetus behind this report.

16(1) – Inspection
16(3) – Maintenance records
17(1) – Repairs
17(3) – Load limits
18(1) - Signage



Percentage of non-compliance by Forest Road Regulation section (140 bridges)

While most of the non-compliance occured under section 18(1), the Board recognizes that often these problems are caused by vandals and aren't known to the licensees. For example, the lack of delineators is something auditors often see in their fieldwork. Auditors have found it is not always the licensees who are at fault for not having delineators in place. Recreational road users sometimes vandalize or remove these signs, and sometimes trucks will knock the delineators off the bridge without the driver knowing it. It isn't until the audit is conducted that the licensee finds out that the signs or the delineators are missing.

The bullet holes on this delineator sign are just one example of the vandalism auditors often see.

Public safety would be well served if industrial users of the bridge who notice missing or broken signs or delineators reported the situation to the responsible licensee.

Next steps

Forest company operators and Small Business Forest Enterprise Program operators need to be vigilant when it comes to bridge inspection and maintenance. Given the large number of bridges on logging roads in British Columbia, the high level of industrial use and the increasing number of backcountry recreationalists using logging roads to get to their destination, the potential for harm to people and the environment is significant.

Where audits found non-compliance, formal recommendations have been made to individual licensees by the Board. However, all licensees should be fully aware of the issue and take any action needed on bridges under their responsibility before the stream work window closes in late September.

Audit reports and more information about the Board is available on our Web site at www.fpb.gov.bc.ca or by contacting:

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